

Bruce Mannakee
Chemcoaters, LLC
700 Chase Street, Suite 700
Gary, Indiana 46404

Re: Registered Construction and Operation Status,
089-12606-00460

Dear Mr. Mannakee:

The application from Chemcoaters, LLC, received on August 14, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following metal coil coating source, to be located at 700 Chase Street, Suite 700, Gary, Indiana 46404 Indiana, is classified as registered:

- (a) One (1) roll coater, known as Gen-Coater, exhausted to Stack C, capacity: 600 feet per minute, 150 feet per minute when operating in a batch mode.
- (b) One (1) alkaline cleaner, known as Alkaline Cleaner #1, exhausted to Stack A, capacity: 1000 feet per minute, 600 feet per minute when in-line with the Gen-Coater, 150 feet per minute when operating in a batch mode.
- (c) One (1) electrostatic oiler, known as Electrostatic Oiler #1, capacity: 1000 feet per minute, 600 feet per minute when in-line with the Gen-Coater, 150 feet per minute when operating in a batch mode.
- (d) One (1) natural gas-fired boiler, known as Boiler #1, equipped with low NO_x burners, exhausted to Stack B, rated at 12.5 million British thermal units per hour.
- (e) One (1) natural gas-fired furnace, known as Furnace #1, exhausted to Stack D, rated at 3.0 million British thermal units per hour.
- (f) Two (2) natural gas-fired furnaces, known as Furnace #2 and #3, exhausted to Stacks E and Stack F, respectively, rated at 0.1 million British thermal units per hour, each.
- (g) One (1) natural gas-fired furnace, known as Furnace #4, exhausted to Stack G, rated at 0.130 million British thermal units per hour.
- (h) One (1) natural gas-fired water heater, known as WH#1, exhausted to Stack H, rated at 0.2 million British thermal units per hour.
- (i) One (1) mixing tank, capacity: 300 gallons of coating mix.
- (j) One (1) feed tank, capacity: 300 gallons of coating mix.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 2-3 (Emission Offset) any change or modification which may increase potential to emit to twenty-five (25) tons per year of VOC or NO_x or one hundred (100) tons per year of all other criteria pollutants from this source, shall cause this source to be considered a major source under Emission Offset, 326 IAC 2-3 and shall require approval from IDEM, OAM prior to making the change.
- (2) Pursuant to 326 IAC 2-7 any change or modification which may increase potential to emit to twenty-five (25) tons per year of VOC or one hundred (100) tons per year of all other criteria pollutants from this source, shall cause this source to be considered a major source under 326 IAC 2-7 and shall require approval from IDEM, OAM prior to making the change.
- (3) Pursuant to 326 IAC 2-6 (Emission Reporting) the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).
- (4) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (5) Pursuant to 326 IAC 6-2-4 (Emission limitations for facilities specified in 326 IAC 6-2-1(d)) boiler #1 rated at 12.5 million British thermal units per hour is subject to the requirements of this rule that limits PM emissions as follow:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units.

Q = Total source maximum operating capacity rating in million British thermal units heat input. The maximum operating capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit, in which case, the capacity specified in the operation permit shall be used. (12.5 million British thermal units per hour)

$$Pt \quad \underline{1.09} \quad = 0.565 \text{ pounds per million British thermal units.}$$

$$12.5^{0.26}$$

- (6) Pursuant to 326 IAC 6-3-2 (Process Operations) the particulate matter (PM) from Furnace #1-Furnace#4, WH#1 and the two (2) mixing tanks shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour.}$$

- (7) Pursuant to 326 IAC 8-2-4 (Coil Coating Operations), the daily volume weighted average volatile organic compound (VOC) content of coating delivered to the applicators at the Gen-Coater and the Electrostatic Oiler shall be limited to 2.6 pounds of VOCs per gallon of coating less water.

The daily volume weighted average of VOC content shall be calculated using the following formula, where n is the number of coatings (c):

$$\frac{\sum_{c=1}^n \text{3 coating c (gal)} \times \text{VOC content of c (lbs/gal, less water)}}{\sum_{c=1}^n \text{3 coating c (gal)}}$$

- (8) Pursuant to 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the Gen Coater and to Electrostatic Oiler #1 except when otherwise specified in 40 CFR Part 60, Subpart TT.
- (9) (a) Pursuant to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.460, Subpart TT (Standards of Performance for Metal Coil Surface Coating) the Gen-Coater and the Electrostatic shall not cause to be discharged into the atmosphere more than 0.28 kilogram VOC per liter (kg/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device.

This VOC content limit also satisfies the VOC content requirements for 326 IAC 8-2-4 (Coil Coating Operations).

- (b) The Permittee shall conduct an initial performance test for the Gen Coater and the Electrostatic Oiler#1 and thereafter a performance test for each calendar month for each affected facility according to the procedures in this section.
- (c) The Permittee shall use the following procedures for each affected facility that does not use a capture system and control device to comply with the emission limit specified under Sec. 60.462(a)(1). The Permittee shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysis of each coating, as received, using Reference Method 24. The Administrator may require the owner or operator who uses formulation data supplied by

the manufacturer of the coatings to determine the VOC content of coatings using Reference Method 24 or an equivalent or alternative method. The Permittee shall determine the volume of coating and the mass of VOC-solvent added to coatings from company records on a monthly basis. If a common coating distribution system serves more than one affected facility or serves both affected and existing facilities, the Permittee shall estimate the volume of coating used at each affected facility by using the average dry weight of coating and the surface area coated by each affected and existing facility or by other procedures acceptable to the Administrator.

- (i) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied during each calendar month for each affected facility, except as provided under paragraph (c)(1)(iv) of this section. The weighted average of the total mass of VOC's used per unit volume of coating solids applied each calendar month is determined by the following procedures.

- (A) Calculate the mass of VOC's used ($M_o + M_d$) during each calendar month for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{ci} + \sum_{j=1}^m L_{dj} D_{dj}$$

Where n is the number of different coatings used and m is the number of different VOC solvents added to the coatings used during the calendar month.

- (B) Calculate the total volume of coating solvents used (L_s) in each calendar month for each affected facility by the following equation:

$$L_s = \sum_{i=1}^n V_{si} L_{si}$$

Where n is the different coatings used in the calendar month.

- (C) Calculate the volume-weighted average mass of VOC's used per unit volume of coating solids applied (G) during the calendar month for each affected facility by the following equation:

$$G = \frac{M_o + M_d}{L_s}$$

- (ii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during the calendar month for each affected facility by the following equation:

$$N = G$$

- (iii) Where the volume-weighted average mass of VOC's discharged to the atmosphere per unit volume of coating solids applied (N) is equal to or less than 0.28 kg/l, the affected facility is in compliance.
 - (iv) If each individual coating used by an affected facility has a VOC content, as received, that is equal to or less than 0.28 kg/l of coating solids, the affected facility is in compliance provided no VOC's are added to the coatings during distribution or application.
 - (d) Where compliance with the numerical limit specified in Sec. 60.462(a) (1) or (2) is achieved through the use of low VOC-content coatings without the use of emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, the owner or operator shall compute and record the average VOC content of coatings applied during each calendar month for each.
 - (e) Where compliance with the numerical limit specified in Sec. 60.462(a) (1), (2), or (4) is achieved through the use of low VOC-content coatings without emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, each owner or operator subject to the provisions of this subpart shall include in the initial compliance report required by Sec. 60.8 the weighted average of the VOC content of coatings used during a period of one calendar month for each affected facility. Where compliance with Sec. 60.462(a)(4) is achieved through the intermittent use of a control device, reports shall include separate values of the weighted average VOC content of coatings used with and without the control device in operation.
- (10) A quarterly summary of the information to document compliance with Condition 9(a) shall be submitted to:

**Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**

using the reporting form located at the end of this registration, or their equivalent, within thirty (30) days after the end of the quarter being reported. This report will also serve to assure compliance with Condition 7.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3)). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015**

Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

PMC/MES

cc: File - Lake County
Lake County Health Department
Air Compliance - Ramesh Tejuja
NWRO
Permit Tracking - Janet Mobley
Air Programs Section- Michele Boner
Gary Indiana Division of Air Pollution Control - George Kolettis

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Chemcoaters, LLC
Address:	700 Chase Street, Suite 700
City:	Gary, Indiana
Authorized individual:	Bruce Mannakee
Phone #:	219-944-4440
Registration #:	CP 089-12606-00460

I hereby certify that Chemcoaters, LLC is still in operation and is in compliance with the requirements of Registration **089-12606-00460**.

Name (typed):	Bruce Mannakee
Title:	
Signature:	
Date:	

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Monthly Report

Source Name: Chemcoaters, LLC
Source Address: 700 Chase Street, Suite 700, Gary Indiana, 46404
Mailing Address: 700 Chase Street, Suite 700, Gary Indiana, 46404
Part 70 Permit No.: CP 089-12606-00460
Facility: Gen-Coater and Electrostatic Oiler #1
Parameter: Daily volume weighted VOC content
Limit: 0.28 kilogram VOC per liter of coating solids applied for each calendar month

Month: _____ Year: _____

Day				Day			
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				no. of deviations			

- 9 No deviation occurred in this month.
9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

NATURAL GAS-FIRED BOILER CERTIFICATION

Source Name: Chemcoaters, LLC
Source Address: 700 Chase Street, Suite 700, Gary Indiana, 46404
Mailing Address: 700 Chase Street, Suite 700, Gary Indiana, 46404
Part 70 Permit No.: CP 089-12606-00460

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this permit.**

Report period

Beginning: _____

Ending: _____

Boiler Affected

Alternate Fuel

Days burning alternate fuel

From

To

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

A certification by the responsible official is not required for this report.

Mail to: Permit Administration & Development Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

Chemcoaters, LLC
700 Chase Street, Suite 700
Gary, Indiana 46404

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal knowledge of the
(Company Name)
representations contained in this affidavit and am authorized to make these representations on behalf of
_____.
(Company Name)
4. I hereby certify that Chemcoaters, LLC located at 700 Chase Street, Suite 700, Gary Indiana, 46404, completed construction of the metal coil coating source on _____ in conformity with the requirements and intent of the Part 70 Operating Permit application received by the Office of Air Management on August 14, 2000 and as permitted pursuant to **CP No. CP 089-12606, Plant ID No. CP 089-00460** issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 20 _____.

My Commission expires: _____.

Signature

Name (typed or printed)

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Chemcoaters, LLC
Source Location:	700 Chase Street, Suite 700, Gary, Indiana 46404
County:	Lake
SIC Code:	3479
Operation Permit No.:	CP 089-12606-00460
Permit Reviewer:	Paula M Cognitore

The Office of Air Management (OAM) has reviewed an application from Chemcoaters, LLC relating to the operation of a metal coil coating operation.

New Emission Units and Pollution Control Equipment

The source consists of the following new facilities/units:

- (a) One (1) roll coater, known as Gen-Coater, exhausted to Stack C, capacity: 600 feet per minute, 150 feet per minute when operating in a batch mode.
- (b) One (1) alkaline cleaner, known as Alkaline Cleaner #1, exhausted to Stack A, capacity: 1000 feet per minute, 600 feet per minute when in-line with the Gen-Coater, 150 feet per minute when operating in a batch mode.
- (c) One (1) electrostatic oiler, known as Electrostatic Oiler #1, capacity: 1000 feet per minute, 600 feet per minute when in-line with the Gen-Coater, 150 feet per minute when operating in a batch mode.
- (d) One (1) natural gas-fired boiler, known as Boiler #1, equipped with low NO_x burners, exhausted to Stack B, rated at 12.5 million British thermal units per hour.
- (e) One (1) natural gas-fired furnace, known as Furnace #1, exhausted to Stack D, rated at 3.0 million British thermal units per hour.
- (f) Two (2) natural gas-fired furnaces, known as Furnace #2 and #3, exhausted to Stacks E and Stack F, respectively, rated at 0.1 million British thermal units per hour, each.
- (g) One (1) natural gas-fired furnace, known as Furnace #4, exhausted to Stack G, rated at 0.130 million British thermal units per hour.
- (h) One (1) natural gas-fired water heater, known as WH#1, exhausted to Stack H, rated at 0.2 million British thermal units per hour.

- (i) One (1) mixing tank, capacity: 300 gallons of coating mix.
- (j) One (1) feed tank, capacity: 300 gallons of coating mix.

Existing Approvals

There are no existing approvals for this source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
A	Alkaline Cleaner #1	20.0	4.0	20,000	180
B	Boiler #1	20.0	1.6	4,156	450
C	Gen-Coater/Dryer	50.0	2.5	9,000	194
D	Furnace #1	44.0	0.83	n/a	n/a
E	Furnace #2	16.0	0.3	varies	450
F	Furnace #3	16.0	0.3	varies	450
G	Furnace #4	16.0	0.3	varies	450
H	WH#1	16.0	0.3	varies	450

Enforcement Issue

There are no enforcement actions pending.

Source Definition

Chemcoaters, LLC will be leasing land owned by Chase Land. Although Chemcoaters, LLC and Chicago Steel have some of the same owners and officers in common, the companies are un-connected financially and legally. Chemcoaters, LLC has no relationship with any of the other companies located on Chase Land.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 14, 2000, with additional information received on September 18, 22, 25, and October 10, 2000.

Emission Calculations

- (a) See pages 1 through 5 of 5 of Appendix A of this document for detailed emissions calculations.

- (b) Product Betz-Dearborne 3118B contains 10% hydrofluoric acid. The hydrofluoric acid is not emitted to the atmosphere because of the application method and the chemical reaction with the substrate.
- (c) The product will not go through both the Gen-Coater and the Electrostatic Oiler. It may go through the Alkaline Cleaner and then either the Gen-Coater or the Electrostatic Oiler.
- (d) The following equipment is also located at the source but does not have any emissions:

One electric (1) infra red dryer, one (1) deflector, Shear, Debur and Bridle Rools, one(1) Chill and Bridle Rolls, one(1) exit Shear, Trimmer and Extensioner and one (1) exit deflector rewind.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.133
PM ₁₀	0.534
SO ₂	0.042
VOC	24.1
CO	5.90
NO _x	4.29

HAPs	Potential To Emit (tons/year)
Glycol Ether	6.4
Benzene	0.0002
Dichlorobenzene	0.00008
Formaldehyde	0.005
Hexane	0.126
Toluene	0.0002
Lead	0.00004
Cadmium	0.00008
Chromium	0.0001

HAPs	Potential To Emit (tons/year)
Manganese	0.00003
Nickel	0.0002
TOTAL	6.53

The potential to emit (as defined in 326 IAC 2-5.1-2) of all criteria pollutants are less than twenty-five (25) tons per year and greater than five (5) tons per year and/or ten (10) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

Actual Emissions

This is a new source; therefore, there is no previous emission data.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Gen-Coater/ Electrostatic Oiler	0.00	0.00	0.00	22.94	0.00	0.00	6.40
Boiler #1	0.104	0.416	0.033	0.301	4.60	2.74	0.10
Furnace #1-#4 & WH#1	0.029	0.118	0.009	0.85	1.30	1.55	0.03
Alkaline Cleaner	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions	0.133	0.534	0.042	24.1	5.90	4.29	6.53

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM ₁₀	nonattainment
SO ₂	nonattainment
NO ₂	severe nonattainment
Ozone	severe nonattainment
CO	maintenance attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as non-attainment for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Lake County has been classified as nonattainment for PM₁₀, SO₂ and CO. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR Part 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.133
PM ₁₀	0.534
SO ₂	0.042
VOC	24.1
CO	5.9
NO _x	4.29
Single HAP	6.4
Combination HAPs	6.53

This new source is **not** a major stationary source because PM₁₀ and SO₂, are not emitted at a rate of one hundred (100) tons per year or greater and VOC and NO_x are not emitted at a rate of twenty-five (25) tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) VOC is less than twenty-five (25) tons per year and all other criteria pollutants are less than hundred (100) tons per year,

- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) any combination of HAPs is less than twenty-five (25) tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) The one (1) natural gas-fired boiler, known as Boiler #1, rated at 12.5 million British thermal units per hour is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc) because it will be installed after the June 9, 1989 applicability date and is rated between ten (10) and one hundred (100) million British thermal units per hour. The amount and type of fuel combusted in Boiler #1 shall be recorded monthly.
- (b) The one (1) mixing tank and the one (1) feed tank with a capacity of 300 gallons, each, are not subject to New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb) because the capacities are less than or equal to 40 cubic meter, are not storage tanks and will be built after the July 23, 1984 applicability date.
- (c) The Gen-Coater and the Electrostatic Oiler are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.460, Subpart TT (Standards of Performance for Metal Coil Surface Coating)). This rule requires that each owner and operator subject to this subpart shall not cause to be discharged into the atmosphere more than 0.28 kilogram VOC per liter (kg/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-3 (Emission Offset)

The Emission Offset rule does not apply because the potential to emit of VOC and NO_x is less than 25 tons per year and the potential to emit of all other criteria pollutants is less than 100 tons per year.

Any change or modification which may increase potential to emit to twenty-five (25) tons per year of VOC or NO_x or one hundred (100) tons per year of all other criteria pollutants from this source, shall cause this source to be considered a major source under Emission Offset, 326 IAC 2-3 and shall require approval from IDEM, OAM prior to making the change.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC in Lake County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-1-11.1 (Fugitive Dust Emissions)

The source is not subject to the requirements of 326 6-1-11.1 because the fugitive dust emissions from the source are less than 5.0 tons per year.

State Rule Applicability - Individual Facilities

326 IAC 6-2-4 (Emission limitations for facilities specified in 326 IAC 6-2-1(d))

- (a) Boiler #1 rated at 12.5 million British thermal units per hour is subject to the requirements of this rule that limits PM emissions as follow:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units.

Q = Total source maximum operating capacity rating in million British thermal units heat input. The maximum operating capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit, in which case, the capacity specified in the operation permit shall be used. (12.5 million British thermal units per hour)

$$Pt = \frac{1.09}{12.5^{0.26}} = 0.565 \text{ pounds per million British thermal units.}$$

As shown in the spreadsheet for the boiler combustion, the PM emissions from this boiler are 0.104 tons per year for the 12.5 million British thermal units per hour boiler. This is equivalent to 0.024 pounds per hour of particulate matter per 12.5 million British thermal units heat input or 0.0019 pounds per million British thermal unit. Therefore, the boiler complies with the 0.565 pounds of particulate matter per million British thermal units heat input limit.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the two (2) mixing tanks shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour.}$$

326 IAC 8-2-4 (Coil Coating Operations)

Pursuant to 326 IAC 8-2-4 (Coil Coating Operations), the daily volume weighted average volatile organic compound (VOC) content of coating delivered to the applicators at the Gen-Coater and the Electrostatic Oiler shall be limited to 2.6 pounds of VOCs per gallon of coating less water.

The daily volume weighted average of VOC content shall be calculated using the following formula, where n is the number of coatings (c):

$$\frac{\sum_{c=1}^n \text{coating } c \text{ (gal)} \times \text{VOC content of } c \text{ (lbs/gal, less water)}}{\sum_{c=1}^n \text{coating } c \text{ (gal)}}$$

326 IAC 8-2-9 (Miscellaneous Metal Coating)

The Gen-Coater and the Electrostatic Oiler are not subject to the requirements of 326 IAC 8-2-9 because as stated in 326 IAC 8-2-9(b)(1), this rule does not apply to, "Any metal parts or products limited by other sections of this rule." Since the requirements of 326 IAC 8-2-4 are applicable to this aluminum coil coating line, the requirements of 326 IAC 8-2-9 are not applicable.

Conclusion

The construction and operation of this coil coating source shall be subject to the conditions of the attached proposed CP 089-12606-00460.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Chemcoaters, LLC
Address City IN Zip: 700 Chase Street, Suite 700, Gary, Indiana 46404
MSOP: 089-12606
Plt ID: 089-00460
Reviewer: Paula M Cognitore
Date: August 14, 2000

Boiler #1

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

12.50

109.50

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	50.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.104	0.416	0.033	2.74	0.301	4.60

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 4 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions****Company Name: Chemcoaters, LLC****Address City IN Zip: 700 Chase Street, Suite 700, Gary, Indiana 46404****Part 70: 089-12606****Plt ID: 089-00460****Reviewer: Paula M Cognitore****Date: August 14, 2000****Boiler #1****HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.150E-04	6.570E-05	4.106E-03	9.855E-02	1.862E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.738E-05	6.023E-05	7.665E-05	2.081E-05	1.150E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Furnace

Company Name: Chemcoaters, LLC
Address City IN Zip: 700 Chase Street, Suite 700, Gary, Indiana 46404
Part 70: 089-12606
Plt ID: 089-00460
Reviewer: Paula M Cognitore
Date: August 14, 2000

Furnace #1-#4 and WH#1

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

3.53

30.92

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.029	0.118	0.009	1.55	0.085	1.30

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 4 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions**

Company Name: Chemcoaters, LLC
Address City IN Zip: 700 Chase Street, Suite 700, Gary, Indiana 46404
Part 70: 089-12606
Plt ID: 089-00460
Reviewer: Paula M Cognitore
Date: August 14, 2000

Furnace #1**HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.247E-05	1.855E-05	1.160E-03	2.783E-02	5.257E-05

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	7.731E-06	1.701E-05	2.165E-05	5.875E-06	3.247E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Page 1 of 5 TSD App A

Company Name: Chemcoaters, LLC
Address City IN Zip: 700 Chase Street, Suite 700, Gary, Indiana 46404
CP: 089-12606
Plt ID: 089-00460
Reviewer: Paula M Cognitore
Date: August 14, 2000

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
Gen-Coater																
PPG Chemform	8.45	73.12%	67.1%	6.0%	68.4%	24.11%	0.19000	54.000	1.62	0.51	5.24	125.68	22.94	0.00	2.12	100%
PPG Organo-Krome	9.02	57.65%	57.6%	0.0%	63.8%	35.40%	0.20000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Betz-Dearborne Procoat 9857	9.49	57.01%	57.0%	0.0%	64.9%	35.06%	0.20000	54.000	0.00	0.00	0.01	0.25	0.04	0.00	0.00	100%
Oakite Gardobond VP 4918/2	8.50	100.00%	99.1%	0.9%	99.0%	0.00%	0.20000	54.000	7.65	0.08	0.83	19.83	3.62	0.00	n/a	100%
Oakite Gardolube L6333	8.28	100.00%	99.3%	0.7%	99.0%	0.00%	0.30000	54.000	5.80	0.06	0.94	22.53	4.11	0.00	n/a	100%
PPG Chemfos 2007	9.26	90.00%	90.0%	0.0%	80.0%	20.00%	0.30000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Betz-Dearborne DC-3118B*	13.73	3.00%	3.0%	0.0%	3.0%	70.00%	0.60000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Betz-Dearborne DC-2550*	9.31	76.00%	76.0%	0.0%	0.0%	15.00%	0.30000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Betz-Dearborne DC-2510*	12.03	21.00%	21.0%	0.0%	0.0%	70.00%	0.70000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Betz-Dearborn ProCoat 9858	9.36	62.00%	62.0%	0.0%	0.0%	30.00%	0.20000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Betz-Dearborn Pretreatment 1500*	9.15	75.00%	75.0%	0.0%	0.0%	15.00%	0.70000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Oakite Okemcoat F1*	11.90	40.00%	40.0%	0.0%	0.0%	43.00%	0.70000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Oakite Okemcoat F2*	9.50	75.00%	75.0%	0.0%	0.0%	15.00%	0.70000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Oakite Gardolube L6336	8.28	0.00%	0.0%	0.0%	0.0%	100.00%	0.30000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Oakite Gardobond 2950	9.44	70.00%	70.0%	0.0%	0.0%	20.00%	0.30000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Oakite Gardobond C 4504*	10.08	70.00%	70.0%	0.0%	0.0%	15.00%	0.30000	54.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Alkaline Cleaner																
Betz-Dearborn Betz Klean 4072 A	9.50	70.00%	70.0%	0.0%	80.0%	20.00%	0.40000	54.000	0.000	0.000	0.00	0.00	0.00	0.00	0.00	100%
Oakite GardoClean TP 10367	10.20	57.00%	57.0%	0.0%	88.0%	12.00%	0.40000	54.000	0.000	0.000	0.00	0.00	0.00	0.00	0.00	100%
Electrostatic Oiler																
Ferrocote 61 MAL HCLI	7.90	3.40%	0.0%	3.4%	0.0%	96.60%	0.04000	54.000	0.269	0.269	0.58	13.92	2.54	0.00	0.28	100%
Ferrocote 61 A US	7.60	6.10%	0.0%	6.1%	0.0%	93.40%	0.07000	54.000	0.464	0.464	1.75	42.06	7.68	0.00	0.50	100%
Metalub PL-7105A	7.70	0.10%	0.0%	0.1%	0.0%	99.90%	0.07000	54.000	0.008	0.008	0.03	0.70	0.13	0.00	0.01	100%
HAPs																
PPG Organo-Krome	9.02	0.20000	54.000	1.5%	6.40											
Uncontrolled											5.24	126	22.9	0.00		

A unit is 1000 square feet of ciled steel of aluminum

* These products are diluted with water, since there are no VOC or PM emissions from these products RTS was not calculated.

This is a batch process. Continuous operation at the equipment rated capacity is not possible.

The equipment is stopped to load and fasten coils, change coatings and purge roller applicators, and to unload coated coils.

Betz-Dearborne DC-3118B contains hydrofluoric acid but it will not be emitted to the atmosphere.

The worst case senerio is that the coil would go through the alkaline cleaner and then the Gen-Coater using Chemform.

State Potential Emissions

Add worst case coating to all solvents

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used